

Message

From: g.d.beckett [g.d.beckett@aquiver.com]
Sent: 6/21/2018 3:49:47 PM
To: Whittier, Robert [Robert.Whittier@doh.hawaii.gov]; Donald Thomas [dthomas@soest.hawaii.edu]; TU, LYNDSEY [Tu.Lyndsey@epa.gov]; Matt Tonkin [matt@sspa.com]; Gabrielle.Granger@doh.hawaii.gov
CC: Linder, Steven [Linder.Steven@epa.gov]; Shalev, Omer [Shalev.Omer@epa.gov]
Subject: RE: Perhaps a Meeting of the Minds Soon?

Hello again,

Just a quick, but related aside. I went back to some references for JP-8 composition. There is often limited to no BTEX, particularly the first three (BTE). So one of the Navy's main lines of rationale for naphthalenes being an outlier because there is no BTEX in the potential breakthrough curves is unsupported by at least some literature (e.g., API 4593, 1994), keeping in mind there are a range of values depending on the crude & refining sources. A potential is that there was no BTEX breakthrough because there was no BTEX in the source fuel to begin with. That was why I've asked many times whether they have any site specific forensics, which they do not. So while it is possible the JP-8 released in 2014 had some fraction of BTEX, it is also possible it had none (which comports with the data we have). Beyond that, other products that have naphthalenes but no BTEX include diesel fuel marine that could also be a potential prior source of the low-level detections we see periodically at outbound wells.

Just food for thought...

Best regards.

On June 20, 2018 at 11:26 AM "TU, LYNDSEY" <Tu.Lyndsey@epa.gov> wrote:

Hi Gary,

I agree that we all need to start thinking about effort going into the review of the tech memo. I'm glad you're thinking about accommodating the upcoming workload, and we've already asked Matt to begin thinking about this and provide some options to us for review.

To everyone regarding timing of the tech memo: The tech memo will come out the 20th of July and we will be in Hawaii in person to begin preliminary TUA discussions the week of August 13th. We will all have about two weeks to do an initial read, with the third week before the 13th for our internal discussion of our review. Though I can't estimate how much time you'll need, I would advise holding at least some time in those two weeks for an in depth read of the tech memo. Our meetings that week will be very broad and the tech memo will be a smaller component of a significant amount of work supporting the TUA decisions. We'd like to have a basic understanding of the good and the bad of the tech memo- but there may not be a full meeting devoted to the tech memo. My understanding is that the GWMWG meeting will be primarily for discussion of the capture zone model the Navy will be providing, but will not cover the rest of the tech memo.

As far as the type of work, I believe we should all discuss this together. Our role is to look at and comment on the Navy's approach, as well as what needs to be adjusted in the final models. It's a bit of a fine line to 'independently review' vs. derive our own assumptions and answers. What you are proposing reads as an independent analysis, which I am not in favor of. Instead I think it would be more appropriate to independently *test* the assumptions the Navy's making, highlight inconsistencies or inaccuracies and provide some specific recommendations for changing their work moving forward. I think we can make important observations working within the Navy's tech memo, so we should discuss further the ways (and effort) you can envision doing that work.

I agree that we should all have a chat about who is doing what related to the Tech Memo in the next couple of weeks. In the interim, perhaps everyone (who hasn't already) could send me their anticipated review plan (very, very simplified) of the report and the capture zone model if applicable. I'll try to pull it into a more organized single document and we can use it for our discussion to try and reduce duplication.

Feel free to reach out for more clarification.

Thanks,

Lyndsey Tu

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From: G D Beckett [mailto:g.d.beckett@aquiver.com]
Sent: Tuesday, June 19, 2018 9:06 AM
To: Donald Thomas <dthomas@soest.hawaii.edu>; Gabrielle.Grange@doh.hawaii.gov; Matt Tonkin <matt@sspa.com>; TU, LYNDSEY <Tu.Lyndsey@epa.gov>; Whittier, Robert <Robert.Whittier@doh.hawaii.gov>
Subject: Perhaps a Meeting of the Minds Soon?

Hello folks,

As we all know, there are a number of things happening (or not) on the Red Hill groundwater protection front. We have a few items that are clearly defined, and a number of other items that are important, but less defined. It might help us all to have an internal call for the purpose of detailed scoping and timing of the most critical tasks, both those internal to our team and those we are expecting of the Navy &/or USGS.

One task that Fenix has given me is to complete some framing LNAPL transport modeling. I see that maybe working as follows. Matt & his folks will finish their geologic spatial analysis and determine ~3 cross-sectional type areas where LNAPL transport is likely to be worst-case. Those might include any place where open voids (tubes, off-gassing features, etc.) or high permeability bedding are present near the base of various tanks. We would then take those & get parameterization input from Bob & Don. With the cross-sections parameterized, I would then run some transport scenarios for chronic and instantaneous releases of volumes consistent with Phil Meyers work and our own ranges like Omer provided. The key to this is being geologically site specific but picking those potential real conditions that would be anticipated to result in worst-case transport. In turn, that would give us a framing on how far and fast NAPL might migrate and whether or not the Navy's Red Hill capture zone would actually be effective.

That of course is just a single example of the many items we have in front of us, including review of recent and upcoming Navy work products and at what level of detail we need those (and who does them). We have limited time within the schedule and at least for me, I would like to have a sense for the ebb & flow of the work effort so I can best arrange my availability.

Best regards.

G.D. Beckett, RG, CHg

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